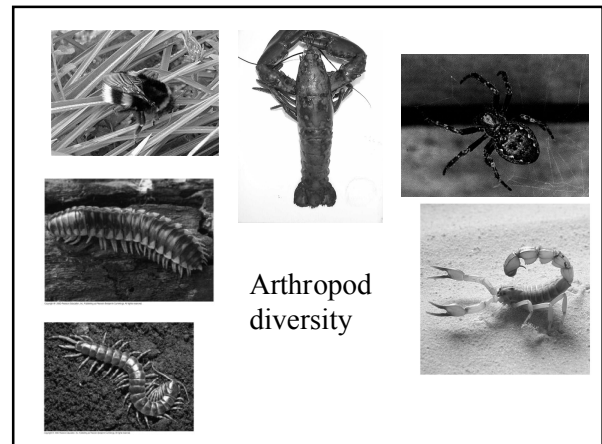
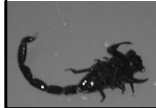


Arthropods: Invertebrate Kings!



- Three tissue layers
- Coelom
- Full one-way digestive system
- Bilateral Symmetry
- Mostly separate sexes (some hermaphrodites)
- Internal fertilization and external development



Arthropod diversity

Why are Arthropods so successful

1. Exoskeleton – tough outer covering made of chitin
 - Protects body tissues
 - Prevents drying out
 - Site for muscles to attach
 - Problem: must be shed periodically as the animal grows. Called molting
2. Body segments organized into distinct regions

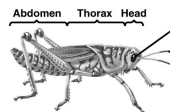
Why are Arthropods so successful

3. Jointed appendages adapted for various functions
 - Eg. Legs, antennae, wings, etc
4. Well developed organ systems, especially nervous system
5. Variety of food sources and structures for obtaining food.

The Insects – most successful Arthropods

• Distinctive features:

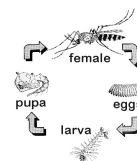
- 3 body regions – head, thorax and abdomen
- 3 pairs of legs
- Wings



Why are Insects so successful?

- 1) Body Adaptations: Flight, Body Armour, Feeding Organs, etc.

- 2) Small in size. Less space required
Can hide easily



- 3) Reproductive Adaptations:
 - short life spans; large numbers of offspring.

- 4) Social insects : Ants and Bees have very complex social systems

